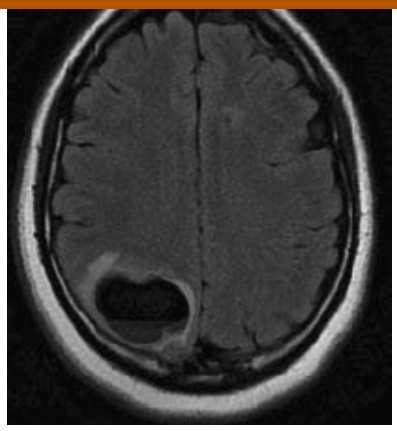

Right posterior parietal lobe NCC cyst on MRI.

Methods: CT scan of the head demonstrated multiple, bilateral supratentorial calcific nodules highly suggestive of Neurocystercercosis (NCC). Abdominal ultrasound was negative for focal hepatic lesions. Anticonvulsant and steroid treatment were begun.

Results: Serum was sent to the parasitology lab at the CDC for NCC serology, and it was positive. The patient completed an 8-day course of albendazole as an outpatient without incident, but presented one month later with recurrent seizures refractory to IV anticonvulsant therapy.

Conclusion: NCC is a parasitic infection of the brain caused by the tapeworm *Taenia solium*, and is the most common cause of late-onset seizures in countries where the infection is endemic, such as Haiti (1, 2). Diagnosis can be made clinically or by serology, but neuroimaging using MRI and CT have improved diagnostic accuracy (1). Vesicular (living) cysticerci appear as isodense cystic lesions with thin walls without perilesional edema. The scolex is usually visualized as a ''hole-with-dot'' lesion (3). Colloidal cysts (degenerating parasites) are ill-defined ring-enhancing lesions surrounded by edema. Granular cysticerci (continued degeneration) appear as nodular hyperdense lesions surrounded by edema or a rim of gliosis. Calcified cysticerci appear on contrast enhanced images as small hyperdense nodules without perilesional edema or abnormal enhancement after parasite death. The large fluid/fluid containing cyst noted in our patient presented a diagnostic challenge. Published reports of large central nervous system cysts with intracystic fluid/fluid levels are lacking in the NCC literature. But the CT findings, positive serology for NCC and the low likelihood of two parasitic diseases of the brain convinced us of the diagnosis of NCC.

doi:10.1016/j.ijid.2010.02.2126

Detection of *Toxoplasma gondii* antibody for diagnosis of ocular toxoplasmosis

F. Maleki[1,*], S. Sarafpoor[2]

[1] *Iran University of Medical Sciences, Tehran, Iran, Islamic Republic of*
[2] *Iran university of medical sciences, Tehran, Iran, Islamic Republic of*

Background: Forty patients with cataracts, as well as 40 patients with proven ocular toxoplasmosis were enrolled in this prospective clinical study.

Methods: Serum IgG and aqueous IgG in both group were measured by enzyme linked immunosorbent assay (ELISA) and the corresponding ratios were calculated.

Results: Serum IgG/ Aqueous humor IgG ratio was less then 100 in the patient group and more then 100 in the control group. On the other hand in the chorioretinitis subgroup the ratio was less 13, while in the group with uveitis, the ratio was more then 13 ($P < 0.05$).

Conclusion: The results revealed that calculating the ratio = SerumIgG (antitoxo)/AqueousIgG (antitoxo) may be helpful as an adjunet to diagnosis in cases with clinically atypical ocular toxoplasmosis.

doi:10.1016/j.ijid.2010.02.2127

58.004

Two-dimensional gel electrophoresis analysis of *T. solium* cysticerci lower molecular mass (10—30 kDa) antigens for the serodiagnosis of neurocysticercosis in children

V.S.R. Atluri*, P.D. Singhi, N. Khandelwal, N. Malla

Postgraduate Institute of Medical Education and Research, 160012, Chandigarh, India

Background: Neurocysticercosis (NCC) caused by *T. solium* cysticerci is an increasingly important health issue in Indian children. The sensitivity and specificity of available serological techniques were low in case of single cysticercus granuloma cases which is a more common feature in Indian patients.

Methods: Serum samples were collected from 13 clinically and radiologically suggestive NCC children and seropositive by ELISA, 25 clinically and radiologically suggestive NCC children and seronegative by ELISA and 25 control subjects. The 10—30 kDa antigens of *T. solium* cysticerci were subjected to 2- dimensional gel electrophoresis (2D-PAGE) followed by Enzyme-linked immunoelectrotransfer blot (EITB) assay to detect antibody in serum samples. PDQuest software (Bio-RAD) was used to analyze the Isoelectric Point of the protein spots obtained in the 2D-PAGE.

Results: Analysis of 10—30 kDa antigenic fraction 2D-PAGE map showed 31 proteins between 10- $\leq$28 kDa and innumerable proteins between >28—30 kDa with the Isoelectric point of 3—10. All the 13 (100%) NCC seropositive and 15 (60%) out of 25 NCC seronegative samples were reactive with 2D fraction antigens. In the control group, none of the serum was reactive except 2 hydatid samples (92% specificity). Antigenic fractions present in between 28—30 kDa with 3—10 pI

were immunoreactive with significantly higher number of samples.

Conclusion: The sensitivity and specificity of 2D-PAGE EITB assay were higher than that reported earlier with the use of lentil lectin purified glycoprotein antigenic fractions EITB assay, which is considered the gold standard serodiagnostic method for neurocysticercosis.

doi:10.1016/j.ijid.2010.02.2128

58.005

Prevalence of intestinal parasitic infections in the Ministry of Health Hospitals in Sharjah, UAE: 2-year retrospective study

N. Dash[1,*], H. Al-Jesmi[2], M. AL-Zarouni[3], D. Panigrahi[1]

[1] *University of Sharjah, Sharjah, United Arab Emirates*
[2] *Higher College of Technology, Sharjah, United Arab Emirates*
[3] *Al-Qassimi Hospital, Sharjah, Sharjah, United Arab Emirates*

Background: In United Arab Emirates (UAE) having four and a half million population, Sharjah boasts the third most populated emirate having 600,000 people [1]. Approximately 80% of the population is expatriates coming from countries where parasitic infections are endemic. Many of them find suitable jobs in various food manufacturing industries, hotels, restaurants and fast food outlets. They also work as food handlers, housemaids and baby sitters. Thus, possible transmission can occur between the immigrants workforce and native emarati population in the community. The present study investigates the prevalence of the intestinal parasitic infections in Ministry of Health hospitals in Sharjah emirate of United Arab Emirates.

Methods: Retrospective laboratory data analysis of ten thousand five hundred fourteen fecal specimens in five different Ministry of Health hospitals within the emirate of Sharjah, was carried out between January 2007 and December 2008. The stool specimens were examined using different microbiological analysis including direct and stool concentration techniques.

Results: During the study period, eight hundred fourteen stool specimens were found to be positive for intestinal parasites. Of this 814 positive specimens, five hundred ninety three (73%) were from local emarati people and rest 27% belongs to the expatriates. There was a higher rate of protozoal infections (92.2%) than the helminths infection (7.8%). *Entamoeba histolytica* (71.8%) and *Giardia lamblia* (17.5%) were the commonest intestinal parasites identified. Among the helminths, *Ancylostoma dudenale* and *Ascaris lumbricoides* were the common ones. The rate of protozoa infection in native emarati population was 71% (577). On the other hand, the helminth's infestations were more common among the expatriates (6%).

Conclusion: Possibly the most surprising and unanticipated finding was the far greater prevalence of intestinal parasitic infections among the native emarati population (73%) compared with the expatriates (27%), and this may be attributable to better health seeking attitude and more accessibility of native emarati people to government hospitals then the expatriates. The high prevalence rate among the local people indicates that there is a high transmission rate in the community. The existing screening methods especially for food handlers and housemaids need to be improved and strengthened.

Reference

[1]. UAE Population. (2009, April 28). Retrieved April 28, 2009, from http://www.asiarooms.com/7travel-guide/7united-arab-emirates/7uae-overview/7uaepopulation.html.

doi:10.1016/j.ijid.2010.02.2129

58.006

A study of medically important fish - transmitted parasites in Alexandria

R.M.G. Diab, M.M. ElTemsahy*, E.D. ElKerdany, M. Gaafar, M.A. Nasr

Faculty of Medicine - Alexandria University, Alexandria, Alexandria, Egypt

Background: Seafood has traditionally been a popular part of the diet in many parts of the world. However, salt and freshwater fish can serve as sources of parasitic infections to man. This study aimed to identify parasites of medical importance in the commonly consumed fish in Alexandria namely, *Tilapia zilli*, *Mugil cephalus*, *Clarias gariepinus*, *Brycinus nurse* and *Atherina boyeri*, and to study their infectivity to laboratory mice.

Methods: The study was applied on 300 fish during both cold and hot months throughout a year starting from November 2006 to October 2007. They were examined for the presence of parasites in their intestines and flesh, using modified Ziehl-Neelsen, safranin and modified trichrome stains. Furthermore, fish flesh was screened for metacercariae of Heterophyidae, which were then isolated by in vitro pepsin-hydrochloric acid digestion. Infection of laboratory mice with the detected parasitic protozoa and the encysted metacercariae was done to study their infectivity and their pathological outcome. The obtained heterophyids were examined after clearance in lactophenol and staining with carmine stain.

Results: Results showed that the following parasites were detected; *Microsporidia*, *Cryptosporidia* and *Cyclospora* in fish intestine, and metacercaria of *Pygidiopsis genata* in fish flesh. *Tilapia zilli* was the most infected fish, followed by *Clarias gariepinus*, then, *Atherina boyeri* and *Brycinus nurse*. The least infected fish was *Mugil cephalus*. All the detected parasites were found to be infective to experimental mice as proved by observation of the previously mentioned protozoa and heterophyid eggs in their stool samples, and also by the histopathological changes in their intestinal sections.

Conclusion: Thus, the present work proved that the studied fish harboured infective parasites in their flesh and intestine that can have great impact on the human health.

doi:10.1016/j.ijid.2010.02.2130